a) R_1 represents a group of the formula IIa, IIb, IIe,
R_2 represents hydrogen,
R_3 represents hydrogen,
R_4 represents lower alkyl,
R_5 represents hydrogen or lower alkyl,
or R_3 and R_4 together form a group $-(CH_2)_u-$ or

b) wherein R_1 and R_2 together represent a group of the formula IIf,
R_3 represents hydrogen,
R_4 represents lower alkyl,
R_5 represents lower alkyl and
R_6 is as defined in Claim 1.

3. A compound as claimed in Claim 1 wherein R_6 represents a group of formula IIIa as defined in Claim 1.

4. A compound as claimed in Claim 1 wherein R_1 represents a group of formula IIa, as defined in Claim 1.

5. A compound as claimed in Claim 1 wherein the double bond between the group R_6 and the nitrogen atom is in the trans configuration.

6. A compound as claimed in Claim 1 wherein R_{11} represents alkyl, alkenyl, alkynyl, cycloalkylalkyl, phenyl or phenalkyl.

7. A compound of formula I wherein R_6 represents a group of formula IIIa wherein R_{11} represents alkyl preferably C_2-C_8alkyl, more preferably C_2-C_6alkyl most preferably C_2-C_4alkyl for example n- or in particular t-butyl.

8. A compound of formula I wherein R_6 represents a group of formula IIIa wherein R_{11} represents α-hydroxy substituted alkyl; alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, phenyl, phenalkyl or thienyl.

9. N-Methyl-N-(1-naphthylmethyl)-non-2(trans)-en-4-ynyl-1-amine.

10. N-Methyl-N-(1-naphthylmethyl)-6,6-dimethyl-hept-2(trans)-en-4-ynyl-1-amine.

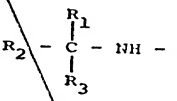
11. A compound as claimed in claim 1 in the form of its hydrochloride.

12. A chemotherapeutical composition comprising an effective amount of a compound as claimed in claim 1 or a chemotherapeutically acceptable acid addition salt thereof in admixture with a chemotherapeutically acceptable diluent or carrier.

13. A method of treating diseases or infections caused by mycetes which comprises administering to a subject in need of treatment an effective amount of a compound as claimed in claim 1 or a chemotherapeutically acceptable acid addition salt thereof.

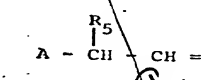
14. A process for the production of compounds of formula I as defined in Claim 1 which comprises

a) when R_6 represents a group of formula IIIa, as defined above, (compound Ia), reacting a compound of formula IV,



IV

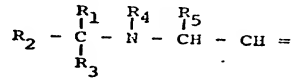
wherein R_1 to R_4 are as defined above, with a compound of formula V,



V

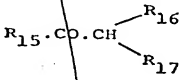
wherein A is a leaving group, R_5 is as defined above, and R_6' stands for a group of formula IIIa, as defined above, or

b) when R_6 represents a group of formula IIIa, wherein R_{11} represents α-hydroxyalkyl (compounds Ib), reacting a metalated compound of formula Ic,



Ic

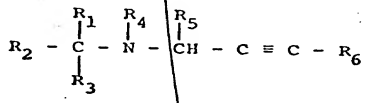
wherein R_1 to R_5 are as defined above, with a carbonyl compound of formula VII,



VII

wherein R_{15}, R_{16} and R_{17} represent independently hydrogen or lower alkyl, or

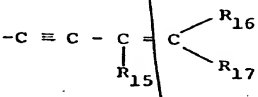
c) when the double bond between R_6 and the nitrogen atom is in trans configuration (compounds Id) reducing a compound of formula VIII,



VIII

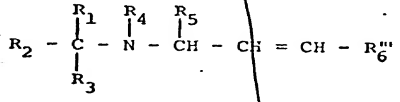
wherein R_1 to R_6 are as defined above, with diisobutylaluminiumhydride, or

d) when R_6 represents a group of IIIb or IIIc as defined above or a group of formula IIId,



IIId

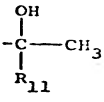
wherein R_{15}, R_{16} and R_{17} are as defined above (compounds Ie) splitting off water from a compound of formula



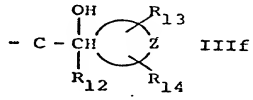
If

wherein R_1 to R_5 are as defined above,

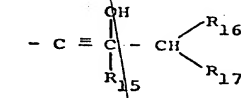
and R_6''' represents a group of formula IIIe, IIIf, or IIIg,



IIIe ;



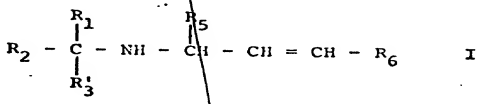
IIIf



IIIg

wherein R_{11} to R_{17} and Z are as defined above, or

e) when R_3 represents hydrogen or lower alkyl and R_4 represents C_{1-6}alkyl or C_{3-8}cycloalkyl-(C_{1-6})-alkyl (compounds Ig), introducing the group R_4' into a compound of formula IX,



IX

wherein R_1, R_2, R_5 and R_6 are as defined above,

R_3' represents hydrogen or lower alkyl, and

R_4' represents C_{1-6}alkyl or C_{3-8}cycloalkyl-(C_{1-6})-alkyl.

add B7

add D7 add A